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ABSTRACT

Opportunities and barriers in post secondary education for the mature woman are the focus of the first part of this review. Barriers including college restrictions, family resistance, and financial problems as well as attitudinal and self-concept characteristics are discussed. Opportunities are presented in a review of counseling considerations and programs which have been established. Theory and research on career choice for women, especially the "re-entry" woman, comprise the second section. The major theories are presented as well as the findings of recent research studies. The third section deals specifically with interest measurement for women. The issue of sex bias is discussed; recent research in the area is reviewed. A summary and implications section is included as well as an extensive bibliography. The National Institute of Education Guidelines for Assessment of Sex Bias and Sex Fairness in Career Interest Inventories is appended. (Author)

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A SELECTIVE REVIEW OF THE EDUCATIONAL PROCESS, CAREER CHOICE, AND INTEREST MEASUREMENT

Carol Kehr Tittle

Elenor Rubin Denker

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Foreword

Many diverse populations are presently seeking special educational opportunities. The Institute for Research and Development in Occupational Education (IRDOE) is particularly involved with those programs which aim to develop marketable skills. One recent and on going project is devoted to recruiting a new student to the CUNY system: the re-entry woman who has been out of the formal education mainstream for many years.

The first challenge is to assist these women in the initial steps of re-entering the educational system. While we have developed and are continuing the project to assist women with this first action, we are also concerned with examining the full range of barriers to re-entry and the support services required once a decision is made to undertake post-secondary education.

This bibliography was supported to assist the examination of experiences in other settings, and to provide information useful to further planning. The review makes clear that once women have made the committment to become students again, institutional changes may be required in order to assist them in completing studies. We plan to extend our program development efforts in this direction, and encourage communications from readers concerned with the problems inherent in the process.

Lee Cohen, Director
IRDOE

Abstract

Opportunities and barriers in postsecondary education for the mature woman are the focus of the first part of this review. Barriers including college restrictions, family resistance, and financial problems as well as attitudinal and self-concept characteristics are discussed. Opportunities are presented in a review of counseling considerations and programs which have been established.

Theory and research on career choice for women, especially the "re-entry" woman, comprise the second section. The major theories are presented as well as the findings of recent research studies. The third section deals specifically with interest measurement for women. The issue of sex bias is discussed; recent research in the area is reviewed.

A summary and implications section is included as well as an extensive bibliography. The National Institute of Education Guidelines for Assessment of Sex Bias and Sex Fairness in Career Interest Inventories is appended.

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I. Introduction

Within the past few years there has been increasing interest in, and development of, educational programs for a relatively new group of women students in postsecondary education. This group of students is often designated by the term re-entry, to indicate that these women are re-entering the educational system after leaving it for time periods ranging from only a few years to as many as twenty or more years.

Recent college enrollment data collected on a national level indicate that several major changes have occurred in the college population since 1970 (U.S. Bureau of the Census, 1975). The number of women college students has increased by 30 percent (1970 to 1974), compared to an increase for men of about 12 percent, and overall account for about 63 percent of the increase in college enrollment in the past four years. (The female college student population was 44 percent in 1974, compared to 41 percent in 1970.)

Since 1972, the college enrollment figures have been collected on persons 35 years and older. From 1972 to 1974, the number of college students in this age group increased by 30 percent (to about 1 million students). The percent change from 1970 to 1974 for college enrollment of women of various age groups shows that there was an increase of 27 percent for ages 20-21, 29 percent for ages 22-24, 108 percent for ages 25-29, and 95 percent for ages 30-34. Comparable figures for men were 11%, 4%, 39%, and 64%. The percent change from 1973 to 1974 for women over 35 enrolled was 32 percent, and for men 28 percent.

These data provide evidence that the re-entry woman is appearing in college in increasing numbers, that the greatest proportional increase is among older women--ages 25-34--with the number over 35 also apparently increasing. These women are likely to enroll in college part time, so that both in age status and time enrolled they differ from the typical undergraduate female student. (63 percent of the 25-34 age group attend part-time, 80 percent of the over 35 age group, compared to 17 percent of the 18-24 year olds.)

One question that may well arise is how well do these older re-entry women students perform in college? There is some fragmentary data from studies typically conducted at universities and four-year colleges, to

describe women re-entering college and their performance. From these limited data, the re-entry woman would be described as about 43 years old, from a metropolitan area, and usually married, with children (DeWolf and Lunneborg, 1972; Fought, 1970). In a study by Clements (1974) a number of self-report inventories were administered to 164 women above 25, and 509 women in the 18-22 age range in a teacher education program. Sixty-eight percent of the older sample were married, they had a divorce rate below the national average, had less family education than the younger group, did not differ significantly on high school grades, had more positive attitudes toward work, and had fewer hostile and depressive responses on a personality measure.

Lunneborg, Olch and DeWolf (1974) predicted college performance for older students. Middle-aged undergraduates (100 women and 53 men) were compared to university freshmen. Median scores for older students were above the 75th percentile on vocabulary and spelling, below the 25th percentile on quantitative tests, and not significantly different from students of the same sex on other tests. Sex differences were found: women had a higher level of secondary school performance and lower level of aspiration than the men (DeWolf and Lunneborg, 1972); DeWolf and Lunneborg also report that while women were more dependent on their spouses for support, men were supported by full-time employment, savings, or the GI bill.

Hanson and Lenning (1973) reported ability, interest, and aspiration/goal (ACT Career Planning Profile) measures for a cross-sectional sample of about 8,000 community college students grouped into categories 19 years (or less), 20-24, 25-39, and 40 or over years. Age and sex trends were reported for the ability measures. No consistent trends across age levels were found for the eight interest scales, but there were mean sex differences, with men having higher average scores on Scientific, Trades and Technology scales and women having higher average scores on the Health, Artistic and Social Service scales.

Academically, the "mature" woman is a good student. Clements (1974) found that the women over forty achieved better than those between the ages of 18 and 25. The finding that, "older students typically earned higher grades than younger students," was reported by Hanson and Lenning

(1973) in their study at a community college. Halfter (1962) found that older women scored an average of 10 percentile points better than their younger classmates. Doty (1966) compared 40 mature women who had entered college degree-granting programs with 40 mature women who did not enroll in postsecondary education courses after the age of 23. Returnees, it was found, were motivated to adjust their environments to fulfill their own needs.

From the data cited above, it is clear that there is a new group of women students entering higher education in increasing numbers. It also seems that older women, as well as men, are capable of satisfactory academic performance. As Cross (1971) has noted, women of all ages, and often of lower socio-economic status, comprise the largest reservoir of academically qualified people who have not, in the past, attended college. With the trend of older students, colleges are now developing pilot programs for women wishing to re-enter the academic and work worlds. The present review is the outgrowth of one such project to assist women in making decisions about re-entering the educational system.

During the 1974-75 school year, two series of workshops were conducted for women recruited from the neighborhoods of two community colleges in New York City (Chitayat and Carr, 1975). The workshops described the option of continuing education and possible college majors that would be useful in the world of work. Re-entry women in this program, and as generally defined in this review, do not take occasional adult courses, but rather enter college degree programs.

This review was undertaken in order to gain further understanding of the re-entry process for women and the nature of the supporting services that would be required. The review is organized by a consideration of the process of education for re-entry women, the theory and research of career choice for women, and the nature of interest measurement for women, particularly issues of sex bias and the findings of research studies.

Since there are several related bibliographies and reviews available, the present work concentrates on recent research studies (1972-1974). Appendix 1 lists these earlier bibliographies. Non-research articles have been included where they deal with issues not yet empirically

researched. The primary sources for this paper were Women Studies Abstracts, Psychological Abstracts, and ERIC Abstracts.

We turn now to an examination of education for re-entry women, considering first the barriers to re-entering the educational system for women, then the varied aspects of counseling the mature woman, and the programs that have been reported as developed for the re-entry woman.

II. Education for Re-entry Women

The process of re-entering the educational system will be facilitated for women if the programs and counseling provided are based on an understanding of the barriers these women face. "Re-entry women" are not a single group. As noted earlier, there is variability on age, marital status, and other characteristics. There will also be variations in which of the barriers described below are most problematic for individual women. Knowledge of the barriers, as analyzed thus far, is also reflected to some extent in the sections describing counseling and educational programs that have been developed for women.

A. Barriers

What prevents or hinders a mature woman from re-entering the educational system? Verheyden-Hilliard (1975) has described some of the issues for re-entry women, and noted that their decisions must often include considerations of family responsibility, time and financing of education. Ekstrom (1972) reviewed the literature on barriers to women's participation in postsecondary education.[1] She categorized the causes of women's lower participation rates, compared to men, as institutional, situational, and dispositional. Institutional factors that exclude women from postsecondary education include sex and age quotas in admission practices, financial aid practices, regulations, deficiencies in curriculum planning, insufficient student personnel services and faculty/staff attitudes.

Recent federal guidelines, notably Title IX of the Higher Education Amendment Act of 1972 (see the Federal Register, June 4, 1975), bar sex discrimination in admissions, financial aid, curriculum, and awards, for institutions receiving any federal monies. However, the barriers that affect re-entry women even more directly than these are reactions to their age, lack of financial aid for part time students, and difficulties in transferring credits (and establishing credits for out-of college experiences). Programs for low-income women over age 30, according to one project cited by Ekstrom, found it necessary to provide financial aid for books, carfare, meals away from home, and child care.

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[1] Ekstrom's survey was part of a planned larger examination of the barriers to participation of women in continuing education. See Ball and Cross (1972). The full project was not completed. Westervelt (1975) has up-dated Ekstrom's survey.

Institutional regulations on full-time course loads or on completion of studies within a particular time period can act as barriers to women. Strict attendance requirements may hinder women with children, especially low-income women. Ekstrom summarized the problems in curriculum planning and student personnel services as: flexibility in time and location of courses to meet needs of different categories of women (e.g., women with young children, women with children of school age), provision of child care facilities for women associated with the university, specialized counseling and orientation programs, external degree programs (TV and correspondence courses), use of larger time blocks for courses, and access to academic resources, such as the library, health services, and counselors. Negative attitudes about women may affect the student in a number of ways. Faculty and staff may discourage women students from graduate study, provide less help in job placement, and provide counseling that reflects sex stereotypes and masculine expectations about women's life styles. Numerous studies and case histories have provided documentation of the discrimination against women because of their sex.

The second major category Ekstrom dealt with was situational barriers. The situations considered were sociological, familial, financial, residential and personal. For re-entry women, lower social class membership is more likely to reduce their participation in postsecondary education than for males. The attitudes of husbands and family responsibilities are also likely to deter women's entry to college. For women who are heads of households, financial support is likely to be particularly critical. Regional differences exist in access to "free" higher education. Personal circumstances that may act as barriers include lack of qualifications for a particular school, lack of knowledge of available opportunities, and negative attitudes of friends, neighbors and employers toward continuing education.

The third major category of barriers is labelled dispositional by Ekstrom. These include attitudes, motivation, and personality. Women's views of appropriate sex roles, ambivalence about education, intellectual activity and careers are obstacles to re-entering education and adequate planning in the earlier, high school years. Some research indicates that

women have lower levels of aspiration and different motives from men in entering college. For two samples of mature students, women had lower levels of aspiration than men (DeWolf and Lunneborg, 1972; Hanson and Lanning, 1973). An analysis of census data (Hussein, Note 1) gave the results of a question on adult education: 86% of the men responded that their reason for taking adult education courses was to improve or advance in their jobs; for women the comparable figure was 44%. On the other hand, 19% of the females were studying to get a new job, and 12% of the men. Personality characteristics that have been cited as presenting barriers to women lie in feelings of dependency and passivity associated with the feminine role, and a tendency by both males and females to undervalue the work of women.

A further analysis of the attitudinal and personality characteristics that may serve as barriers to women has been provided by Bem and Bem (1973) and documented by Mason and Bumpass (1973). Bem and Bem describe sex role socialization practices that influence women's expectations. Psychological barriers arise in the form of the professed incompatibility of womanhood and career. For readers unacquainted with this type of analysis, the Bem and Bem document is clearly written and provides examples of the sex role socialization that is carried out in the United States.

Mason and Bumpass (1973) presented the results of sex role questions from a national survey of women under the age of 45. Women both over and under 30 strongly supported the segregation of basic roles by sex; support for women's rights in the labor market was also high. Attitudes remain highly traditional, especially among whites, with regard to the mother's relation to her preschool children. The authors stated that this belief may be a key attitude in contemporary sex-role ideology because it encourages women to drop out of the labor force periodically; this may underlie continued support for the generalized division of labor. Black women were considerably more liberal on 7 out of 14 questions asked, perhaps because they share a subgroup norm that recognizes the costs of traditional role definitions. Miller (1973) has discussed the problems of inner city women in white schools (traditional liberal education systems). Credit for life experiences which could be used in lieu of certain courses, and the logistics of returning to school (child care, loss of

income, and so on) are cited as problems by Miller.

Obstacles to women's re-entry to the labor market (Seear 1971) are similar to those of re-entry into education. Most women are not fully qualified professionals and have had no specific training. Their knowledge of the educational and labor market can be limited and inaccurate. What field or job should the woman seek? How should she attempt to enter the academic world or seek training? What practical arrangements are needed to meet domestic responsibilities? Guidance and counseling are needed, according to Seear.

Another fundamental barrier may reside in the re-entry woman's basic education. If the woman aspires to a more skilled or responsible job, inadequate basic education can prove a serious handicap. Girls are not encouraged or taught to look ahead to the different directions their lives may take. Decisions to leave the educational system at the high school level, to drop mathematics, for example, are not examined for the limits they put on later career development. A further barrier may exist in the nature of the education or training process itself. There is a need for some adaptation and for the provision of financial aid so that women can re-arrange existing duties. Full financial support and adequate re-entry counseling may be decisive in enabling women to take the first and difficult steps in re-entry. Seear noted that other barriers arise in the form of attitudes and opinions, held by women themselves, the academic community, and future employers.

One example of easing the first and difficult step in re-entry was provided through a workshop series conducted at two community colleges. Chitayat and Carr (1975) report recruiting women in local communities (low and middle SES) to participate in a series of workshops oriented toward three areas: self-awareness, college information, and career orientation. An introductory conference was attended by 335 women, a total of 167 attended the workshops which followed; 95 women completed the program and 80 applied for admission to the community colleges. The report contains a complete description of the women recruited and the workshop procedures.

Many of the barriers inherent in the categories Ekstrom calls institutional and situational can be eased by thoughtful college management

and planning programs for women. Those in the third category, personality, are perhaps best dealt with through an activity that almost all the studies cited recommend, that of counseling. Special considerations in counseling women, especially re-entry women, are discussed next.

B. Counseling

Two special issues of journals have appeared on the topic of counseling women. Women and Counselors (Volume 51 of the Personnel and Guidance Journal, 1972) dealt with a number of issues related to counseling women. Of most interest to counseling the re-entry woman were articles by Haener, Eason, and Schlossberg. Haener (1972) pointed out the problems of the working woman, particularly in lower paid occupations, and the goal of assisting women into higher paid, more non-traditional occupations. Eason (1972) provided a classification of life styles for women who are middle class and involved in volunteer work. The classification appears to be useful in distinguishing values (Theoretical, Influential, Aesthetic, Social) of the "leisure class" woman. Schlossberg (1972) discussed counseling women within a decision-making framework. She used the Tiedeman and O'Hara view of two major stages in decision making: anticipation and implementation. She viewed the counselor's task with women as opening up the whole world of occupations to women, in the anticipation stage, and as working to make this a reality by being activists, also. Schlossberg argued for a "total developmental guidance program" in addition to individual counseling. The activities of the New York State Guidance Center for Women were given as examples (counseling individuals and groups; appraising client's potentials; orienting adults in the community through workshops; developing outreach programs; placing clients in educational and/or training opportunities; and so on). (See Westervelt, 1968.) The decision-making framework of anticipation and implementation stages would seem to be useful in developing programs for re-entry women; programs can be specifically focused toward a woman's stage of decision-making.

The Counseling Psychologist devoted an issue to counseling women (Volume 4, 1973). Vetter (1973) wrote on career counseling theories and related research, and Doherty (1973) on sexual bias in personality theory. Schlossberg and Pietrofessa (1973) provided a review of the research on bias in counseling and the implications for counselor education.

Jakubowski-Spector (1973) described the development of assertive training and Westervelt (1973) provided an interesting review of the psychological impact of feminism on educated women. A supplemental list of 185 references on women included psychological and vocational characteristics (Belson, 1973).

Oliver (1975) has provided a review of recent research on women and counseling implications. The areas in her review include counselor bias, the use of sex-stereotyped tests, demographic changes, sex differences and sex-role stereotypes. Several studies have demonstrated a sexist bias in counseling situations, particularly for female clients entering non-traditional (engineering) as opposed to traditional (teaching) fields. Relevant to counseling re-entry women, Troll and Schlossberg (1971) examined age bias in college counselors. Their results indicated that for a sample of members of adult developmental guidance associations and college and university deans, counselors were less biased than non-counselors, and those with a course in counseling and guidance were more biased than those without. Women counselors appeared to be less age biased than men counselors. Both age and sex biases should be examined by counselors. Oliver made the following recommendations to counselors based on her review: Be aware of the necessity for dealing with the bias issue in counseling--in yourself, in others, and in the materials you use; emphasize career counseling for women, within a life-planning context, taking into consideration the developmental stages involved; and work with men as well, so they may understand the changes occurring and how to come to terms with these changes. Other appropriate actions for counselors suggested by Oliver are establishing child care facilities, expanding opportunities for part-time employment and part-time study for women with family responsibilities and helping placement offices combat discrimination in interviewing and hiring women.

Several studies have identified counseling needs of adult students. Letchworth (1970) listed several reasons for women returning to college: relief from boredom, need for contact with world, insufficient fulfillment, desire for an interesting job, and escape from responsibility. Difficulties encountered by these women were in scheduling academic and household responsibilities, managing guilty feelings, fear of failure,

and fear of isolation. Likert (1967) reproduced conversations with women who had returned to college, arranged by topics such as: problems in returning to school, anxieties about attitudes of husbands, faculty and other students, fear of failure, finances, discrimination, ways of managing at home, school and work.

Marple (1972) reviewed some of the writing on counseling women and reported the views of counseling held by a group of women at the Continuing Education Program at Wellesley College. Twenty-five women, aged 22-57, almost all married, responded to a mail questionnaire. About 75% of the women stated a "wish to fulfill their own ambitions" as the reason for returning to college. Most had not received counseling in their younger days and were negative about advice received in earlier days. "Most had never been encouraged to think about the substance of education, and few had even been encouraged to think about it in terms of a job, much less a career" (p. 6).

Williams (1973) administered a questionnaire to 19,884 adults enrolled in continuing education credit courses. Of these, 47% replied; 34% of those replying indicated some urgency for counseling services. Types of services more frequently requested were administrative advice and educational and career information. Other issues for counseling women were identified in a study by Matthews and Tiedeman (1964). Although their study dealt with women in young adulthood, these issues are relevant to counseling women of any age: the woman's impression of the male's reaction to the use of her intelligence; the struggle over the possible position of dominance of men at work and the "place" of women at home; the conflict between family and work demands upon a woman's time; the dilemmas of timing in dating and marriage; and the issues in acceptance of the general outline of the feminine role.

In addition to the studies cited above, other research has examined specific variables with implications for counseling women. Wolfe (1969) examined the work values of women. The work values examined were dominance-recognition, economic, independence, mastery-achievement, interesting activity and social. The women in this study all demonstrated a high need for work to yield mastery-achievement and social values. Women who differed in educational attainment, field of work, social class and work

patterns differed in work values.

Jeghelian (1969) identified different sex-based subcultures related to age, marital status and occupational level of mature women students (older, married women who were housewives; older, single, low level jobs; older, single, career; and younger, single, low level). Schofield and Caple (1971) examined the self-concepts of mature and young women students. In comparing groups of women over 30 and under 30 in a college of education, the author concluded that there was as much variation within groups as between, and that generally there was a lack of evidence that mature women experience an identity crisis after their children are in school (as contrasted with Letchworth, cited above, who gave the view that older women returning to college go through an identity crisis).

Mackeen and Herman (1974) examined the effects of group counseling on self-esteem for three groups of adult women in Canada. Group 1 included 24 women designated as "middle class"; group 2 had 9 women receiving provincial assistance; and group 3 had 15 women on city social assistance (non-ramdonly formed groups differing on marital status, SES). Their results indicated that changes in level of self-esteem only occurred for group 2, in which 2 women were single (with children) and the remaining 7 were separated, widowed or divorced; this group, they stated, had no distracting crises to contend with. Group participation did not affect levels of anxiety, depression and hostility. Tomlinson-Keasey (1974) contrasted a measure of fear of success for two groups of women--older married coeds (80 women, married, 54% with children, mean age = 32) and younger unmarried coeds (160 women, mean age = 20). The two groups had different levels of fear of success (lower levels for older women) as well as different patterns of responding to situationally determined cues. The author concluded that counselors must attend to the role demands facing single college women and realize that "fear of success" may be a temporary factor in the total motivational system of women. Counselors need to realize that anxiety about achieving may deter women from male-dominated fields while in college; however "atypical" preferences may emerge again after basic role demands have been met.

Several articles described programs based on views of counseling women. Berry et al. (1966) emphasized social change, future oriented opportunities

and a life planning approach (the latter based on the multiple roles women have). Fought (1970) provided a rationale for programs for the adult woman seeking an educational course of action based on several stages: readiness stage, exploration stage, and action stage. Manis and Mochizuki (1972) emphasized the removal of psychological blocks that keep women from the choices they need to make to change life styles. The goals included building trust; learning to communicate; building self-confidence; learning to make decisions and take risks; and learning about the opportunities of the outside world. Birk and Tanney (1973) developed a program for high school women that might be applicable to re-entry women. These authors dealt with the influence of sexism and stereotypic attitudes about women's roles, consideration of unconventional (for women) occupations, and discussion of the pervasive myths about women's work habits.

Holland (1974) has proposed some guidelines and criteria for reducing sex bias in vocational services. He gave ratings to common sources of vocational information--interest inventories, computer guidance systems, average counselor, average person or parents--on several criteria. The criteria were whether the source was reliable, valid, effective, efficient, nonbiased, and provided a wide range of options. The same criteria were used to rate the Kuder inventories, the SVIB, and Holland's Self-Directed Search (SDS). Holland reached the "tentative" conclusion that revisions (to reduce bias) of interest inventories and other vocational services may be useful in a face-validity sense, but may have only superficial effects on vocational choices.

This brief overview of issues related to counseling and women has noticeably lacked a discussion of lower class and/or minority women. Differing subcultures are likely to have different counseling problems, but it is not yet clear what the specific variables are. Gump and Rivers (1975) point out that just as majority (white) women are not all alike, neither are minority women. Black women are proportionally higher participants in the labor market, but are the lowest paid of any ethnic group, male or female. Within the professions, they also hold more traditional feminine jobs, and there is some evidence that black students have higher levels of aspirations than white students. Black women appear no less restricted in occupational choice, but less restricted in their view of

the feminine role (e.g., they see marriage and childbearing as compatible with employment).

Some problems are common to all women, yet the data which would permit a better understanding of the age, ethnic and social class linkages that influence women's decisions are not yet available. However, it is possible to summarize some of the main problems that must be dealt with in counseling re-entry women.

These include:

1) stereotyped attitudes about psychological characteristics of women as students, as wives/mothers, as employees, and as decision makers;
2) management of home and academic responsibilities;
3) asserting the rights of the woman, as an individual, in home, social, work, and academic settings;
4) provision of financial support and child care facilities; and
5) provision of current information about educational and vocational opportunities.

For younger re-entry women, Eyde's advice (1970) to the guidance counselor is appropriate. She encouraged discussing the fact that the more children a woman has, the less likely she is to work outside the home. Younger women need to know the statistics about women in the labor market and the length of time they can expect to work, on the average.

C. Programs

What types of programs are available to the re-entry woman? A survey and report by Mulligan (1973) was prepared for the National Advisory Council on Extension and Continuing Education. One hundred ninety program directors responded to a mail questionnaire, and 112 were analyzed. Mulligan concluded that university based programs serving the educational needs of mature women are generally inadequately financed, understaffed and peripheral to the university. Federal assistance is especially lacking for part-time students. Mulligan's review identified potential funding sources for programs for women under existing federal legislation. Sources include Title I of the Higher Education Act, The Education Professions Development Act, Vocational Education Act of 1963 (1968) and the Education Amendments of 1972 (HEA--Section 404 of Title III). A list of names of the college directors of continuing education programs is also

included.

Seear (1971), in a report for the Organization for Economic Co-operation and Development, provided an excellent overview of the re-entry of women to the labor market, and, by extension, to educational programs. A chapter on the United States described the legal and administrative framework in the U.S. Department of Labor, the labor market position of women, and the attempts made to facilitate the re-entry of women. The New York State Guidance Center for Women was mentioned (see Westervelt, 1968), as was the Minnesota Plan at Minnesota University, the Radcliffe Institute (for women of Ph.D. level), the Human Relations Center of the New School for Social Research (see also Hansot, 1973), and statistics from funds made available under the Manpower Development and Training Act of 1962. One such program, Career Opportunities (COP), is linked to community and four-year colleges. This program is unusual in that it recruits minority and lower-class women. Most of the previously mentioned programs are primarily geared to middle-class women.

Several documents provide additional information on the status of programs in women's continuing education (Programs, Problems, Needs, 1968; Royce, 1968; Continuing Education of Women, 1973; Kaynor, 1972; Markus, 1973). Markus provided the results of a survey of women who had contacted a Center for Continuing Education over the period 1964-1972. The women in the study were affluent and from well-educated families. A major problem these women encountered was managing time, and their most significant life changes were achieving stated goals, getting a degree, gaining a specific skill, and achieving a sense of accomplishment.

Taines (1973), Cunningham (1973) and Brandenberg (1974) provided program descriptions. Brandenburg described a Queens College program for about 200 women. The psychological needs of these women--dependent first on parents and then on husbands; negative reactions to returning to school on the part of husbands, children or friends--were reported as well as practical needs. The practical needs were in the area of admissions practices, day care facilities, financial aid, and academic and vocational counseling.

Specific programs with some evaluation data are reported by a number of authors. Reynolds, Purtell, and Voorhees (1969) described a program

for mature women at Middlesex County College, in Edison, New Jersey. This program was a one year certificate program (sponsored under Title I of the Higher Education Act of 1965) designed to retrain mature women for clerical employment. Women aged 25 to 55 enrolled. A six-month follow-up after graduation showed that 25 of the 28 graduates were working, four of them on a part-time basis. Reynolds et al. reported that students were hard working and highly motivated. Counseling was extensively used and specific study skills taught.

Rosenwood and Lunneborg (1972) reported the evaluation of a program for middle-class women (mean age = 41) who enrolled in courses such as Exploration, Perspectives, Focus, and Vocational Search at the University of Washington's Division of Continuing Education. Brief instruments to measure self-image, attitudes toward women, problem-solving ability and career orientation were used to assess change after one quarter (N = 21 experimental group and N = 12 control group, not randomly formed). The only significant difference between the two groups was the improvement in the measure of self-image for the women who took a course. The authors suggested that methodological difficulties may have accounted for the lack of other differences, but also recommended that the program reconsider its goals and ways to accomplish them more effectively. The small numbers were also taken to be indicative of the university's lack of effectiveness with regard to these women.

In the area of counseling, Burnside (1974) described a community college course which used a "human potential seminar model" to counsel women and men returning to college. The program involved the administration of the KOIS and an English aptitude test (for placement purposes), exercises for self-understanding, and discussions of problems of campus life and vocational planning. Two hours of institutional credit were given for the course. Mencke and Cochran (1974) reported the impact of a counseling outreach workshop on vocational development, for male residence hall members at the University of Arizona; Holland's Self-Directed Search (SDS) was used. Significant pre-post workshop changes were recorded in information seeking, the total number of occupations subjects were considering[2] (there was a reduced number of alternatives, post

[2] Subjects were asked to list all the occupations they were "seriously considering."

workshop), and the congruence of these alternacives with their measured interests. No changes were found in attitudes about choosing a career or perceptions of strengths and weaknesses. Birk and Tanney (1973) described a career exploration program for high school students that might be useful with re-entry women. Their goals were to sensitize participants to their acceptance of the status quo regarding woman's role; to broaden awareness of what can be a woman's role; and to explore some attitudes that "lock" women into the status quo and block change.

Jacobson (1969) studied counseling programs for mature women. Of 192 responses, 63 administrators reported special counseling programs, most of them established within the past ten years.

As Seear (1971) pointed out, most full-time jobs that have been available to re-entry women have been in the traiitional woman's professions and low level work in industry, commerce, retail trade and other services. Given the current structure of entry into higher level jobs as highly dependent on a college degree, the need to provide more degree-oriented programs within the "continuing education" field for women is apparent. Low-level opportunities and rewards are not enough. Programs at the college and university level should assert the need for financial aid for women, for day care facilities, and the need for adequate vocational guidance and counseling support in these programs. Since colleges face lowered enrollments, this is an opportune time for women's programs to become more firmly placed within the college and university.

III. Career Choice for Women

The views of counselors and educators planning programs for women are influenced, directly or indirectly, by theories of career choice. These theories reflect a particular view of the occupational world and individual life styles that is based on the career pattern and choices that face men in our culture. To what extent are these theories, and research derived from them, applicable to re-entry women? What attempts have been made to re-formulate them in view of the life patterns of women? What research has been directed toward examining women's career choices?

A. Theory of career choice and women

Vetter (1973) has provided an overview of the major theories of career development and factors affecting career choices among women. She described Super's developmental self-concept theory, and his four types of career patterns for men: stable, conventional, unstable, and multiple trial. The tentative patterns identified for women were: stable homemaking, conventional, stable working, double track, interrupted, unstable, and multiple-trial.

Roe's personality theory of career choice (the importance of early experiences and person-oriented vs. non person-oriented tendencies as factors in occupational choice), and Holland's six types of individuals and work environments (realistic, investigative, social, conventional, enterprising, and artistic) were also described by Vetter. Vetter has a major study in process examining career patterns of women, using most of Super's patterns, and their relationship to demographic and attitudinal variables (Vetter, Note 2).

Cole (1973) reported a study using scales from several interest inventories; women's interests formed a configuration similar to that found for males on the six Holland types. (Andrews (1971) reported a study with male adult community college students supporting Holland's theory relating personality and vocational environments.)

Zytowski (1969) proposed nine postulates that were intended to characterize the life stages of women and patterns of vocational participation. As Vetter (1973) pointed out, some of Zytowski's postulates are unrelated to data on women's employment, particularly that for married, widowed, divorced and single employed women.

Matthews (1969) has defined a pattern of vocational decision making for adult women. The counseling pattern she has proposed for counseling middle-class women draws upon the work of Erikson, Super and Tiedeman. Matthews proposed eight phases of vocational counseling: inner preparation, intensive family involvement, vocational experimentation, vocational planning, vocational implementation, vocational analysis, vocational resynthesis, and vocational development resource. As she is clearly aware, "For the woman of the ghetto, the leisurely phases of counseling developed...would probably be seen as an impossible luxury. Few institutions have begun to forge programs for the intelligent, sensitive, energetic, ambitious, uneducated, adult women of the ghetto" (p. 115).

One attempt has been made to go beyond the psychological (individual) viewpoint of career choices. Blau, Gustad, Jessor, Parnes, and Wilcock (1956) combined concepts from sociology, economics, and psychology to provide a different point of view on career (occupational) choice. In an attempt to answer the question of why people enter different occupations, the social and economic structures were considered, as well as psychological processes. Blau et al. accepted the ideas of Ginsberg and Super that occupational choice is a developmental process that extends over many years. They presented a schema that includes a twofold effect on the social structure. The molding of biological potentialities by the differentiated social structure results in diverse characteristics of individuals, some of which directly determine occupational choice. On the other hand, as the social structure changes, and differing socio-economic organizations occur, some aspects of this change may directly determine occupational selection. This conceptualization seems particularly relevant, since the history of women's employment in occupations has certainly been influenced by other than direct individual psychological processes. (Witness the change in employment in the professions between the 1930's and the present, and the probable effects of current economic recession on gains women have made in traditionally male occupations--police, higher education, etc. As the economy contracts, lay-offs and bias are likely to jointly effect reductions in gains made during the 1960's, for both women and minorities.)

Psathas (1968) used the schema of Blau et al. to formulate how the general theory of occupational choice might operate in special ways for women. Psathas pointed out that the setting of women's choices has been particularly neglected. Men and women have different views of marriage, child-rearing, and work, and these significantly different views affect the manner in which they integrate these activities. Key variables are marriage, intention, and fulfillment--the relationship between the sex role and occupational role. Intention to marry, time of marriage, reasons for marriage, husband's economic situation and attitude toward wife's working are important; family finances, and especially the social class (educational and occupational status of parents) are important. Social mobility and mate selection are also factors.

Sweet (Note 3) has examined some of the above theories, and concluded that they tend to have an antifeminist bias. Sweet states that while blatant antifeminist bias may be relatively rare in vocational psychology, bias is still present as a result of misinterpretation of evidence, the presentation of value judgments as scientific facts, or lack of interest in the particular career problems of women. Theorists support the view that a woman's role in life is primarily that of child bearer and housewife, and that the homemaking role is biologically rather than socially determined. The analysis by Sweet includes critiques of the writings of Super, Osipow, Campbell, the Career Data Book (Project Talent), and research in the theory of career choices.

Doherty (1973) has pointed out that sexual bias currently exists in personality theory also. There is a conflict between the status quo (the world as it is) and the opportunity for women to expand their choices and become more realistic (i.e., 9 or 10 women will work, regardless of whether they marry; about 32 million women are currently employed, and nearly half of these women work for pressing economic need (Women's Bureau, 1972)). Holland's (1975) defense of his six-area typology in personality and vocations, with the resulting concentration for women in conventional and social areas reflects this conflict. Perhaps the radical thesis proposed by feminists such as de Beauvior is one resolution (Sex, Society, and the Female Dilemma, 1975). In her view, "...Society should be totally different. Women should not have that choice (of caring for

children full-time) precisely because if there is such a choice, too many women will make that one" (p. 18).

Theories are necessarily concerned with describing and explaining phenomena. It may be that the paradigm shift (Kuhn, 1970) in theories of career choice, to theories which are useful regardless of an individual's sex, can only occur with a shift in occupational, social and life patterns for men and women. Warnath's (1975) analysis of the limitations of vocational theories supports this view from another perspective--whether "work" is, for a majority of workers, self-fulfilling as theorists assume. In the meantime, research can usefully serve the function of describing the strengths and weaknesses of existing theories from the perspective of women's career choices.

B. Research

Vetter (1973) cited research related to the theories described above; the number of related studies is small. Vetter included a survey of research indicating that there is early development of occupational sex stereotyping, that the attempt to integrate family life and work is much more difficult for women than men, and that male attitudes about the vocational roles that women should pursue are important factors in determining what women will do.

Two studies by Astin and Myint (1971) and Harmon (1970), are of particular interest because they are longitudinal. Astin and Myint followed-up 5,387 women (tested in 1960 in the Project TALENT study) five years after high school. Measures of abilities, interests, personality and background were used. Criterion variables were a 10-group classification of occupational areas (natural sciences, professions, teaching, health fields, business, arts, social service/social sciences, office work, housewife and miscellaneous) and 3 categories of stability in career plans (persister, defector, recruit).

Discriminant analyses showed that scholastic aptitudes, especially in mathematics, and high educational aspirations (college/advanced degree plans) were the best pre-college predictors of a career orientation (sciences, social services, professions, and teaching groups). A second discriminant analysis examined 13 variables related to post high school experiences with respect to jobs, further education and marital status.

BA degree, college and graduate school attendance were important predictors separating natural sciences, social service/social sciences, and teaching from office work and housewife. Having an AA degree carried a large negative weight, and the variables married and children also had negative weights. A third discriminant analysis used 49 predictor, 36 personal, and 13 post high school variables. The most effective predictors in separating the career groups and non career (office work and housewife groups) were completing college and college attendance, and selected aptitude variables. One interesting finding concerned women with artistic orientations; the data indicated that "women with children can and do pursue careers in the arts" (p. 383).

Analysis of the stability of career plans indicated "feminine" occupational groups were most stable (housewife, teaching, health fields and the arts) and had the most "recruits" (changes from other areas). About one-half of the total sample changed career plans between high school senior year and 5 years later. The authors concluded that guidance is needed for women planning to pursue careers requiring specialized training, and especially for girls with low educational aspirations in high school incommensurate with their interests and abilities.

Harmon (1970a) followed up 169 women 10 to 14 years after college entrance (all had high scores on the social worker scale of the SVIB-W). Women were asked what their "usual career" was, and were categorized as career committed and noncommitted on this basis. The two groups did not differ on high school rank. The career committed group attended college longer, worked more years after leaving college, married later in life, had fewer children, more children at later ages, and more were unmarried. Harmon found that women who became career committed apparently did so after college entrance. She concluded that this choice should be made earlier for the most meaningful education of individual women.

Hall and Gordon (1973) examined the career choices of married women. Women college graduates in Connecticut (n about 338) replied to a questionnaire. Satisfaction, role behavior and conflict were studied for three groups: full-time housekeeping and full- and part-time employed. Hall and Gordon concluded that role involvement and conflicts

were generally greater for workers than housewives, although full-time workers differed greatly from part-timers and were the most satisfied of the three groups.

Medvene and Collins (1974) examined the relationship of traditional and non-traditional views of women's roles and occupational prestige. Four groups of women were studied: members of a university caucus, university undergraduates, secretarial and clerical personnel, and non-working women. The groups agreed on the prestige of different occupations but differed on whether the occupations were appropriate for women.

Almquist (1974) examined a class of college women over four years. On the basis of her study, she argued that women do not choose "masculine" (more males employed) occupations as a result of social isolation, rejection or lack of appropriate feminine socialization. Women choosing "masculine" and "feminine" occupations did not differ appreciably in sociability experiences or in relationships with parents. Karman (1973) also examined the characteristics of two groups of women college students: those who intended to pursue stereotypic feminine and stereotypic masculine careers.

> "A brief summary of major group comparisons reveals that women with non-stereotypic aspirations: 1) come from homes with a higher income; 2) have mothers who have reached higher levels of education; 3) are more theoretically oriented; 4) hold more liberal attitudes toward the role of women in society; 5) are higher achieving students; 6) express a stronger liking for science and mathematics; 7) maintain higher academic records in college; 8) tend to have more communication with members of the faculty insofar as the academic and vocational aspects of their lives are concerned; 9) see their college experiences more in terms of vocational and liberal educational benefits; 10) participate in college to a greater degree in social science and academically oriented activities; and 11) are less involved in artistically creative activities...." (Karman, 1973, p. 41)

Klemmack and Edwards (1973) studied college women who indicated that the occupation that they would most realistically pursue was a feminine occupation (occupations ranked by a panel of judges on the sex stereotyping of the stated occupations from 1--least feminine, to 11--most feminine). Degree of femininity of occupational aspirations was an

indirect function of family background. The authors concluded that marriage and family plans serve a critical mediational function in determining the type of occupation desired.

This brief survey of more recent research would not change the views reached by earlier reviewers. Suniewick (1971) and Vetter (1973) both concluded that women are viewed as a separate class, rather than as individuals with individual abilities, aspirations and interests.

Women's educational and vocational decisions are made on the basis of their sex, rather than their individual characteristics. Sex role stereotyping of occupations, and the home-career conflict are important mediators of women's decisions. This is, in general, not true for men, as evidenced by the present theories of career choice. Sweet (Note 3) pointed out that the sex of the individual making vocational choices is clearly a significant variable. In addition to the problem that half of the population is ignored when vocational development research is limited to mainly male samples, vocational theorists have overemphasized the element of self-determination in career related decisions. Sweet argued that this approach has led to a considerable underemphasis in career choice of the variables related to institutional and situational constraints on choice. For example, race or ethnic group and social class may be important variables in determining occupational choice, but studies rarely isolate these variables in testing theories.

Part IV examines the applicability of interest measurement for women. Interest inventories are one tool used by counselors and in some of the programs developed for re-entry women. Is the use of these inventories with women appropriate? What limitations do we presently know about? What are the current research findings?

IV. Interest Measurement for Women

Interest inventories are used in the process of counseling for career choice. Until recently, one of the most popular interest inventories, the Strong Vocational Interest Blank, had separate forms for men and women. Most inventories report different occupational scales or norms for men and women. The issues and methodological questions raised about the use of existing interest inventories with women in general are applicable to the use of these instruments with re-entry women also. The next sections review the charges of bias, some of the changes that have been made within the last two years, and examines existing research, focusing on two interest inventories, the Strong Vocational Interest Blank (SVIB) and the Kuder Occupational Interest Survey (KOIS).

A. Bias and methodological issues

In 1973 the Association for Measurement and Evaluation in Guidance (AMEG) received the report of its commission investigating sex bias in interest measurement (AMEG Commission, 1973). Sex bias was defined: "Within the context of career guidance, sex bias is that condition or provision which influences a person to limit his or her consideration of career opportunities solely on the basis of that person's sex" (p. 72).

Bias was dealt with in terms of the questions and materials used with an inventory, the use of homogeneous scales, and the use of occupational scales. The latter two areas refer to the method of scale construction for interest inventories. Two main types, homogeneous and occupational, have traditionally been used. Occupational scales are based on the relationship between the interests expressed by the taker of the interest inventory and those of individuals already employed in different occupations. Homogeneous scales, scales based on internal criteria, are developed through some form of clustering items--similar types of activities for a job, the theory of the test builder, etc. The responses of the test taker are compared to scales internal to the instrument--perhaps developed by factor analysis.

The Commission's report examined the SVIB for women (SVIB-W) and concluded the use of two forms (one pink for women and one blue for men) was biased and that the women's form was more limited in occupations presented to women than the men's form was for men. The Commission noted that the

proposed revision, the Strong-Campbell Interest Inventory (SCII), would reduce some of these problems (see Campbell, 1973). Huth (1973) also proposed that the SVIB-W was not useful in most counseling situations because it could not differentiate the interests of most women--homemakers and non-professionals. (This issue of the number of occupations that are suggested by an interest inventory will be discussed below--in order to assist full exploration of careers related to those which may appear prominent for an individual on an inventory, most inventory results should be related to some broader grouping of basic interests.) Harmon (1973) evaluated the major interest inventories for sex bias; Tittle (1974) noted that the KOIS scores for women were more limited than men and that the college major scales reported for women restricted them to traditional women's occupations and eliminated major occupations of power and prestige (law, business, marketing, finance, government and premedicine and predentistry).

Diamond (1972) criticized the use of masculinity-femininity scales in interest measurement and reported a study (1971) showing that sex differences in interests were minimized at the high end of the occupational scale (professional occupations), using the KOIS. Differences remained dichotomized on the basis of sex in low-level occupations. Diamond also queried (1972) whether items that differentiate separately between men and women on interest inventories reflect the essential characteristics of workers in the occupation or rather reflect social role characteristics irrelevant to satisfaction with, or success in, the occupation.

These various issues, of face validity, discrimination or bias in scale construction, and so on, are fully discussed in a series of papers commissioned by the National Institute of Education in the course of developing Guidelines for the assessment of sex bias and sex fairness in interest inventories (reproduced in Appendix 2). The papers appear in the publication, Issues of sex bias and sex fairness in career interest measurement (Diamond, 1975). Tanney (1975) examined the face validity of the SCII, the KOIS and the Self-Directed Search (SDS) for sex-role components in language (policeman, saleslady); sex bias in language is an important factor that should be eliminated in

inventory construction.

Gottfredson (1975) tested the effect of sexist wording as opposed to gender-neutral wording on the interests expressed by girls, using the SDS. He concluded that there was no lowering of the scores of girls using sexist wording (draftsman, policeman, salesman). While it is likely that no empirical results will be noted, there are women who have become sensitized to the masculine bias in language. These women will reject instruments that continue to use gender-linked occupational labels as lacking in face validity.

Birk (1974; 1975) examined a number of factors affecting the client's view of interest inventories which may introduce sex bias. She examined test manuals, interpretive materials and the counselor's perception of results. Manuals and interpretive materials typically contain stereotyped examples. Attempts have been made to expand women's career choices by changing test directions. When done with the SVIB-W, one study resulted in an increase in career scales for women. However, a recent study with the KOIS (Tittle and Denker, Note 4) did not find similar results. Changing directions to reduce home-career conflict for women did not, in general, change the most frequently chosen occupations or produce higher mean scores for a sample of re-entry women.

Both the SCII and the KOIS now report scales to all users, male and female, on all scales available for an occupation. The interpretation of these results on cross-sex scales is not clear: some items may have sex-stereotypic responses, rather than occupationally specific responses, and examining a woman's score against male groups may be misleading and vice versa (Diamond, 1972).

Birk makes several recommendations for inventories and interpretive materials that are generally applicable to counseling: the problems of occupational stereotyping should be specifically addressed in career counseling; given comparable qualifications, all jobs are potentially available for persons of either sex; all possible options should be explored for men and women; myths about women and work based on sex-role stereotyping of careers and attitudes should be dispelled; there should be a discussion of factors which may affect a client's scores in a limiting way, e.g. home-career conflict, effects of early experiences on the

development of interests. Similar guidelines followed from a review of literature dealing with counselor-client interaction.

The technical aspects of bias in interest inventories were addressed in papers by Cole and Hanson (Impact of interest inventories on career choice, 1975), Harmon (Technical aspects: Problems of scale development, norms, item differences by sex, and the rate of change in occupational group characteristics, 1975), and Johansson (same topics as Harmon, 1975). As reviewed by Harmon, the major issue is that there are sex differences in item responses. The question is whether a set of items can be constructed that are essentially neutral, as far as being chosen equally by men and women, but will still discriminate among occupational groups. At the present time, different responses to items by men and women mean that same sex norm groups should be provided.

Holland (1975) argues against the latter view of providing same-sex norms. His interest inventory, the SDS, presents only raw scores for interpretation. The results of this procedure are that women with some high school and college education tend to show most interest in the areas of conventional, artistic, and social and the least in realistic, enterprising and investigative. These interest patterns reflect current occupational stereotypes. Gottfredson, Holland and Gottfredson (1974), have shown these interest patterns also reflect census data on occupations. The argument for raw scores has been critized by Prediger and Hanson (1974), in their paper on the distinction between sex restrictiveness and sex bias. Briefly, their argument is that the use of raw scores on the SDS is sex restrictive in that the distribution of career options suggested to males and females is disproportionate.

There are characteristics of current interest inventories that reflect sex differences. However, many of the characteristics that caused charges of sex bias in interpretive materials and gender-linked items are being eliminated by test authors and publishers. The merged form of the SCII is one example; changed interpretive materials for the KOIS is another. Major problems remain in the different responses of men and women to individual test items, with the result that different keys are required for occupational scales and different norms for homogeneous scales. Women (and men) will still perceive that there is a "man's world and women's world." One author (Dewey, 1974) has proposed

a non-sexist method of exploring interests (a non-sexist vocational card sort). However, awareness of the limitations of current inventories and research related to women on these inventories should assist counselors to use these inventories with re-entry women. As the research in the next section indicates, there is an urgent need for further examination of the use of these inventories with adult women re-entering the educational system.

B. Research

Johnson (1970) reviewed the research on the effectiveness of the SVIB-W in counseling women. Validity of the SVIB-W was questioned, particularly since a majority of women appear to subscribe to a common interest pattern (see also Huth, 1973, and Campbell, 1973). For example, on the SVIB-W, as many as 90% of female high school seniors received high scores on the same 3 or 4 scales (Housewife, Office Worker, Stenographer-secretary, and Elementary Teacher).

Two long-term follow-up studies using college women and the SVIB-W show the difficulty in relating occupational interest scores and later occupational data. Harmon (1967b) did not find a relationship between interest scores and occupational status for married women, although there was some relationship for a small sample of single women. The second study (Harmon, 1970a) examined women with high scores on the Social Worker scale in the first year of college. A ten-year follow-up study indicated that half of these women had no "usual occupation." Harmon (1967a) reported increasing the number of higher level scores on the SVIB-W by using a different item selection and weighting system in an attempt to provide further differentiation of women's scores.

Grosz and Joseph (1973) reported a comparison of the scores of black and white college women, using the SVIB-W. These authors concluded that the SVIB-W did not appear to tap the cultural and aesthetic interests of the black college women in their sample.

Munley (1974) used the SVIB-W and a career orientation questionnaire with college women. Significantly different scores were obtained on 25 of 57 occupational scales between a high scoring group and a low scoring group on the career orientation questionnaire. Munley concluded that career oriented women do not necessarily have more typically masculine

interests than homemaking-oriented women; however, career oriented women seem to have interests in occupations that have been traditionally male dominated.

Johnson (1974) did a content analysis of the SVIB-W. Several shortcomings of the inventory in terms of restricted range of interests represented in the item pool and a lack of occupational scales for "outdoors" occupations (oceanographer, forester, landscape architect) were noted. However, many of these criticisms will be lessened as counselors begin to use the new form of the Strong, the Strong-Campbell Interest Inventory, since scores will be reported for women (and men) on all occupational scales, whether constructed on male or female groups.

Two studies examined the use of the SVIB-W with non-professional women. Harmon and Campbell (1968) reported that differences in vocational interests could be developed for stewardesses and dental assistants, whether compared with the Women-in-General group of the Strong (weighted with professional women) or between the two occupations. Campbell and Harmon (1968) conducted a larger study examining 17 occupational groups for use in vocational counseling of non-college women. Harmon (1970b) also reported SVIB-W profiles of 25 culturally different and educationally disadvantaged women (mean age 33) participating in job training and high school equivalency programs. The profiles were not flat or identical; the majority of the women had high scores on the Medical Service and non-professional occupational groups.

One study, cited earlier, attempted to reduce the home-career conflict for women and thereby increase the diversity and level of occupational interests expressed by women. Farmer and Bohn (1970) used a sample of women from a business women's club and found that re-administration of the SVIB-W with experimental directions did increase scores on career scales and decrease scores on the home scales. A study using the KOIS (Tittle and Denker, Note 4) did not find similar results with a sample of re-entry women, predominantly high school graduates.

The studies with the SVIB-W, cited above, are indicative of the results and problems that occur with other interest inventories. Given that the majority of women have tended to express their interests within a limited range of occupations, how can the number of occupations

considered by women be expanded?

A series of studies by Cole and others at the American College Testing Program (Hanson and Cole, 1973) provide one answer and a direction for counseling women using current inventories. Cole (1973) examined the vocational interests of women as expressed on the SVIB-W, the VPI and the KOIS (for the KOIS only 9 scales constructed on males but scored for women were used, since the women's occupational scales were felt to be too limited in types of occupations represented). In the Cole and related studies, an intercorrelation matrix of occupational scale scores or VPI scale scores was analyzed, with the final analysis representing the configuration of the scores in a two dimensional plane. The results of a series of studies, including Cole's with women's data, have indicated a circular hexagonal configuration which orders the domain of vocational interests and occupational scales--Realistic, Intellectual, Investigative, Artistic, Social, Enterprising, and Conventional (using Holland's typology). In this configuration, similar to that expressed by other theorists (Roe, 1956; Roe and Klos, 1969), the adjacent categories are considered more closely related (e.g., Realistic-Conventional) and those most widely separated, least related (Realistic--Social or Intellectual--Enterprising).

Cole (1973) stated the implications of these results, which have been found with samples of men and women, at 2- and 4-year colleges. She suggested that by locating a woman's interests within the observed circular structure, similarities can be shown not only with the location of women's occupations but also with men's occupations at a corresponding location in the structure for men. Cole strongly recommended that with the Holland VPI and the ACT-VIP the present scales be used only to locate a woman's interests on the circular structure or the primary categories of the structure. Lists of both men's and women's occupations that relate to that location should then be provided. (The SCII has adopted the use of Holland's typology, see Campbell, 1974. Suggestions for the KOIS are given below.)

Hanson, Lamb, and English (1974) used data on the Strong-Holland (SCII) and ACT-VIP for a sample of 126 first-year college women. They found generally high correlations between the corresponding scales and the circular ordering of scales found in earlier studies. They also

recommended that the correlations between the occupational scales and Holland types of scales are useful in interpreting vocational interests of women and examining related interest areas.

Harvey (1973) reported a validity study for Holland's VPI with adult women. Harvey administered four criterion tests--SVIB-W, Edwards Personnel Preference Schedule, Study of Values and the Differential Aptitude Tests. His sample was 61 women (mean age = 41) enrolled in a 1970-'71 adult testing and guidance program (Continuing Education for Women, University of Connecticut). Harvey concluded that the VPI could be used with these adult women, and that Holland's Investigative, Conventional, and Enterprising types were most "valid," i.e., related to the other measures as predicted. The Realistic, Social and Artistic categories seemed least applicable with Harvey's sample.

Several studies have included comparisons of scales on the Strong and KOIS. Zytowski (1968) used a sample of male college students who took the SVIB-M, the KOIS and the Minnesota Vocational Interest Inventory (MVII). Comparison of r's for 52 similarly named scales of the KOIS and SVIB-M resulted in a median of .25. A later study by Zytowski (1972) changed the method of analysis (using within subject correlations--i.e., the correlation between the 52 scale pairs was computed for each person). The median correlation was .57, which Zytowski concluded was considerably nearer to a desirable level of congruent validity for the two inventories.

Nafziger and Helms (1972) used correlations reported in the SVIB, KOIS and MVII manuals to compare the occupational scales on the SVIB-M, KOIS, MVII by a cluster analysis. They found clusters of occupations that agreed with the occupations in Holland's classification. Clustering for the women's scales were similar to men's for main cluster I on the KOIS. Main cluster II had typically feminine occupations and was composed only of scales from the women's occupational criterion groups. This second cluster was sex-related, primarily social occupations.

O'Shea and Harrington (1972) also compared the SVIB-M and KOIS in terms of Holland's vocational theory, using a sample of male undergraduate students. They correlated 27 scale pairs of the SVIB and the KOIS. The similarities among the factors on the two inventories were more evident when the Holland codes were examined than when scale names

were used. O'Shea and Harrington also recommended that the KOIS provide occupational groupings according to Holland's codes, as the SCII has done.

Johnson (1971) examined the congruence of SVIB-W and KOIS profiles. The sample was composed of 135 female students majoring in physical therapy. Moderate correlations (median r = .31 to .34) were obtained for individual scales. However, total profiles (based on 21 matched scales) were in greater agreement (median r = .71) for most subjects.

These studies seem to indicate that both the SVIB (and the new SCII) and the KOIS can be interpreted using Holland's typology and that there is at least a moderate amount of commonality between the two instruments. It appears this commonality would become more evident if studies used Holland codes for the occupational scales in both inventories. Cole (1973) took these findings into account in her criticism and suggested use of the KOIS with women. She noted that the women's occupational scales on the KOIS are so limited that the male-derived scales are probably better suited for the purpose of locating women's interest on the circular structure. This recommendation raises another issue, which is of concern now that both the SCII and the KOIS report scores for each person (male or female) on every occupational or college major scale (male-derived or female-derived). This is the problem of interpreting scores for one sex on scale scores derived on the other sex.

In an earlier study of the Kuder Preference Record, Form D, by Hornaday and Kuder (1961) it was found that for 9 or 10 occupations examined, the same key could be used if same-sex norms were provided, and there were some occupations for which separate keys and norms were not essential. Diamond (1971) also found that the male-female distinction was less important for occupations at the high end of the scale (i.e., professional occupations) and still important for low-level occupations.

These studies indicate that test publishers, counselors, and researchers should be cognizant of the recommendations made in the Guidelines for the assessment of sex bias and sex fairness in career interest inventories (1974); providing common items, keys and norms should be a goal of first importance. In the meantime, further data, especially in terms of the use of these inventories with re-entry women should be accumulated. Two

studies are in preparation which will provide some information for the KOIS. The first examines self-reported satisfaction with KOIS results for a group of 56 re-entry women (Denker, and Tittle, Note 5); the second reports the KOIS profiles for a sample of 202 re-entry women (Tittle and Denker, Note 6).

In Johnson's (1970) review, cited earlier, there was a brief discussion of the concept of vocational maturity. Vocational maturity may be related to how useful an interest inventory is for women. That is, to the extent that women are "career-committed" or realistic about the probability of working and the length of time they are apt to be members of the labor force, then perhaps scores on interest inventories will be more "useful" to women, and perhaps more valid in follow-up studies. Two studies reported an examination of correlates of vocational maturity for women. Putnam and Hansen (1972) examined the relationship of self and feminine role concept to vocational maturity in a sample of 375--16 year old middle-class girls. A multiple correlation of .26 was reported for self concept and vocational maturity, and R = .31 for self concept and feminine role concept (own self).

Gable (1973) reviewed some of the literature related to vocational maturity, and predicted that women who were internal (locus of control) would have a higher score on a measure of vocational maturity, and would have more atypical vocational choices. On a sample of 179 female college students, first year to seniors, no differences were found across years on the vocational attitude scale or on the Internal-External Control measure. However, internally controlled women had significantly higher vocational maturity scores than externally controlled women.

One direction for future work is in examining the usefulness of vocational maturity measures, locus of control/self concept, and sex-role attitudes to differentiation and level of expressed interests for re-entry women. There should also be an examination of the fit of Holland's typology for this group of women. If this configuration is found, as it has been in earlier studies with other samples, Cole's recommendations can be directly implemented in counseling re-entry women--to increase the choices in a woman's world.

V. Summary and Implications

Recent college enrollment data indicate that changes have occurred in the college population since 1970. The number of women college students has increased, and the percent increase for women in different age groups shows that the rate of increase is higher for older women (ages 25-29, and 30-34 compared to ages 20-21, and 22-24). These women are more likely to be enrolled as part-time students, so that in both age and time enrolled their status differs from the typical undergraduate female student. The present review examined several areas of concern to these re-entry women: the process of education; career choice for women; and interest measurement for women.

With respect to the education process for re-entry women, some data indicate that mature or older students perform at least as well as the usual undergraduate students. Given that older women students will probably perform as well as other college students, what are critical aspects of the education process for re-entry women? In particular, what are the barriers to women re-entering the educational system, what supportive services are required, and what do we know about programs developed by colleges and universities?

Ekstrom (1972) provided a comprehensive review of barriers to women's participation in post-secondary education. She examined institutional, situational, and dispositional barriers. Important institutional barriers include sex and age quotas, lack of financial aid for part-time students, and problems in transferring credits. Situational barriers lie in attitudes of family members, friends, and employers, and regional differences in access to higher education. Dispositional barriers include women's attitudes, motivation, and personality, particularly as affected by socialization into the "appropriate" role for women.

There are a variety of barriers to re-entry. If a woman is able to take the steps to consider or commit herself to continuing in higher education, most studies and writers agree that counseling services are needed. Here, there are problems of bias among counselors, as well as the attitudes women themselves hold about appropriate occupations for women.

Chitayat and Carr (1975) reported on a program which recruited women to two-year colleges, with a supportive series of workshops aimed at providing some counseling, and academic and career information. This type of program would seem a model for assisting women, particularly lower

socio-economic status women, to take the first steps in overcoming barriers to re-entering post-secondary education. However, there remain the problems of supportive services, both financial and counseling, within the education system. There the problems include age and sex bias on the part of college staff, and the problems re-entry women have in managing home and academic responsibilities. A child care facility may be among the crucial services that would permit a woman to return to school.

There are a variety of programs that have been developed within continuing education centers at colleges and universities. However, according to Mulligan (1973) these remain largely peripheral to the university. The programs tend to be inadequately financed and understaffed. Mulligan did identify some potential funding sources for women's programs under existing federal legislation. There are few evaluation studies of these programs and a need for a systematic evaluation of their effectiveness (especially follow-up in terms of college degrees earned).

A brief review of the current theories of career choice finds little consideration of the different patterns of life and work styles of women. Vetter (1973) provided a review of research related to theories of career choice. These theories do not take into account research that indicates that occupational sex stereotyping occurs very early in the developmental process, that the attempt to integrate family life and work is much more difficult for women than men, and that male attitudes about the vocational roles of women are important factors in determining what women will do. Studies have not been very successful in predicting women's career patterns. It appears that women's educational and vocational decisions are made on the basis of their sex, rather than their individual characteristics. However, the data indicate that a majority of women do remain in the labor market for long time periods. There is a serious question whether theorists and researchers can provide a different perspective, one that would incorporate personal and situational variables explicitly into theories and counseling.

Interest measurement, as well as the theories, are based on the past. Can they be used to provide a wider range of choices to women? There have been charges of sex bias in interest measurement, and some changes in current inventories in response to these criticisms. Issues in bias

include face validity of the instrument (sex stereotyped language and examples in manuals and interpretive materials), as well as methodological issues. The latter encompass item selection, occupational keys, and norm groups. The issues are well discussed in a series of papers commissioned by the National Institute of Education (Diamond, 1975).

The best resolution at present seems to be that proposed by Cole (1973). Interest inventory results should be related to Holland's grouping of occupations (six areas--realistic, investigative, artistic, social, enterprising, and conventional). The full set of occupations for both women and men should be examined. In other words, the inventory can provide a first examination of major areas, but the full range of occupations within these areas and the adjacent domains should be explored. This is the best of an unsatisfactory solution, since the criterion groups for the inventories were established on past data, and the test taker, especially older women, may also reflect stereotyped views of activities and occupations as "appropriate" and "inappropriate" for women and men. However, inventories at least provide some sampling of occupations for consideration, which may otherwise be lacking in unstructured counseling settings.

Research on the use of interest inventories with re-entry women is very limited. Data from studies of re-entry women are needed to determine whether these inventories are useful and provide a broad or narrow range of occupational suggestions to women. Data are also needed on the responses of women and men on cross-sex occupational keys.

The present review indicates that education for the re-entry women is a relatively new phenomenon for colleges and universities. To date, there has not been an extensive commitment to this new population for post-secondary education. As a result, we find little systematic research and evaluation of programs and supportive services in the higher education setting. Similar comments apply to the counseling views of career choice and interest measurement for women. There are some signs that institutions of higher education are becoming responsive to the needs of women, but there is a clear need for financial support and staff allocations to assist re-entry women to overcome the barriers to full participation in our society.

Appendix I

Related Bibliographies on Women, Education, Careers

1. Adult Education Association of the U.S.A., Washington, D.C. and Syracuse University, ERIC Clearinghouse on Adult Education, Syracuse, N.Y. Continuing education for women. 1970. (ED 042 122)

2. Astin, H. S., Suniewick, N., and Dweck, S. Women: A bibliography on their education & careers. Washington, D.C.: Human Service Press, 1971.

3. Barabas, J. Women: Their educational and career roles. An annotated bibliography of selected ERIC references. ERIC-IRCD Urban Disadvantaged Series, Number 31, August 1972. (ED 067 423)

4. Ekstrom, R. B. Barriers to Women's participation in post-secondary education: A review of the literature. 1972. (ED 072 368)

5. ERIC Clearinghouse on Adult Education. Continuing education of women. 1973. (ED 076 869)

6. Kievit, M. B. Review and synthesis of research on women in the world of work. Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education, The Center for Vocational and Technical Education, The Ohio State University, March 1972. (VT 014 690)

7. Pinto, P. R., and Buchmeier, J. O. Problems and issues in the employment of minority, disadvantaged and female groups: An annotated bibliography. (Industrial Relations Center Bulletin 59.) Minneapolis, University of Minnesota, 1973. (ED 083-339//)

8. Westervelt, E. M. Barriers to women's participation in post-secondary education: A review of research and commentary as of 1973-74. Washington, D.C.: National Center for Educational Statistics, 1975.

9. Westervelt, E. M. and Fixter, D. A. Women's higher and continuing education: An annotated bibliography with selected references on related aspects of women's lives. New York: College Entrance Examination Board, 1971.

Appendix II-1

Guidelines for Assessment of Sex Bias and Sex Fairness in Career Interest Inventories

The attached guidelines have been developed as part of the National Institute of Education (NIE) Career Education Program's study of sex bias and sex fairness in career interest inventories. They were developed by the NIE Career Education Staff and a senior consultant and nine-member planning group of experts in the fields of measurement and guidance, appointed by NIE. The draft guidelines were discussed in a broadly representative three-day workshop sponsored by NIE in Washington, D.C. in March 1974. Through successive revised drafts, culminating in this edition of guidelines, the diverse concerns of inventory users, respondents, authors, and publishers were taken into consideration and resolved as far as possible.

During the development of the guidelines, the following working definition of sex bias was used:

> Within the context of career guidance, sex bias is defined as any factor that might influence a person to limit--or might cause others to limit--his or her considerations of a career solely on the basis of gender.[1]

The working definition expresses the primary concern that career alternatives not be limited by bias or stereotyped sex roles in

the world of work.[2] The guidelines represent a more specific definition than previously available of the many aspects of sex fairness in interest inventories and related interpretive, technical, and promotional materials. The issues identified in the course of guideline development are dealt with in commissioned papers to be published by the U.S. Government Printing Office as a book, Issues of Sex Bias and Sex Fairness in Career Interest Measurement, available from the Career Education Program, National Institute of Education, Washington, D.C., 20208 in October 1974.

The term "career interest inventory," as used in these guidelines, refers to various formal procedures for assessing educational and vocational interests. The term includes but is not limited to nationally published inventories. The interest assessment procedures may have been developed for a variety of purposes and for use in a variety of settings. The settings include educational and employment-related settings, among others, and the uses include career counseling career exploration, and employee selection (although the latter may also involve other issues of sex bias in addition to those discussed here).

The guidelines do not represent legal requirements. They are intended as standards a) to which we believe developers and publishers should adhere in their inventories and in the technical and interpretive materials that the American Psychological Association (APA) Standards for Educational and Psychological

Tests (1974) requires them to produce, and b) by which users should evaluate the sex fairness of available inventories. There are many essential guidelines for interest inventories in addition to those relating to sex fairness. The guidelines presented here do not replace concerns for fairness with regard to various ethnic or socioeconomic subgroups. The guidelines are not a substitute for statutes or federal regulations such as the Equal Employment Opportunity Commission (EEOC) selection guidelines (1970) and Title IX of the Education Amendments of 1972 (1972), or for other technical requirements for tests and inventories such as those found in the APA standards. The guidelines thus represent standards with respect to sex fairness, which supplement these other standards.

The guidelines address interest inventories and related services and materials. However, sex bias can enter the career exploration or decision process in many ways other than through interest inventory materials. Several of the guidelines have clear implications for other materials and processes related to career counseling, career exploration, and career decision-making. The spirit of the guidelines should be applied to all parts of these processes.

The guidelines are presented here in three sections: I, The Inventory Itself; II, Technical Information; III, Interpretive Information.

Appendix II-4

I. The Inventory Itself

A. The same interest inventory form should be used for both males and females unless it is shown empirically that separate forms are more effective in minimizing sex bias.

B. Scores on all occupations and interest areas covered by the inventory should be given for both males and females, with the sex composition of norms--i.e., whether male, female, or combined sex norms--for each scale clearly indicated.

C. Insofar as possible, item pools should reflect experiences and activities equally familiar to both females and males. In instances where this is not currently possible, a minimum requirement is that the number of items generally favored by each sex be balanced. Further, it is desirable that the balance of items favored by each sex be achieved within individual scales, within the limitations imposed by validity considerations.

D. Occupational titles used in the inventory should be presented in gender-neutral terms (e.g., letter carrier instead of mailman), or both male and female titles should be presented (e.g., actor/actress).

E. Use of the generic "he" or "she" should be eliminated throughout the inventory.

Appendix II-5

II. Technical Information

A. Technical materials provided by the publisher should describe how and to what extent these guidelines have been met in the inventory and supporting materials.

B. Technical information should provide the rationale for either separate scales by sex or combined-sex scales (e.g., critical differences in male-female response rates that affect the validity of the scales vs. similarity of response rates that justify combining data from males and females into a single scale.

C. Even if it is empirically demonstrated that separate inventory forms are more effective in minimizing sex bias, thus justifying their use, the same vocational areas should be indicated for each sex.

D. Sex composition of the criterion and norm groups should be included in descriptions of these groups. Furthermore, reporting of scores for one sex on scales normed or constructed on the basis of data from the other sex should be supported by evidence of validity--if not for each scale, then by a pattern of evidence of validity established for males and females scored on pairs of similar scales (male-normed and female-normed, for the same occupation).

E. Criterion groups, norms, and other relevant data (e.g., validity, reliability, item response rates) should be examined at least every five years to determine the need for updating.

New data may be required as occupations change or as sex and other characteristics of persons entering occupations change. Text manuals should clearly label the date of data collection for criterion or norm groups for each occupation.

F. Technical materials should include information about how suggested or implied career options (e.g., options suggested by the highest scores on the inventory) are distributed for samples of typical respondents of each sex.

G. Steps should be taken to investigate the validity of interest inventories for minority groups (differentiated by sex). Publishers should describe comparative studies and should clearly indicate whether differences were found between groups.

Appendix II-7

III. Interpretive Information

A. The user's manual provided by the publisher should describe how and to what extent these guidelines have been met in the inventory and the supporting materials.

B. Interpretive materials for test users and respondents (manuals, profiles, leaflets, etc.) should explain how to interpret scores resulting from separate or combined male and female norms or criterion groups.

C. Interpretive materials for interest inventory scores should point out that the vocational interests and choices of men and women are influenced by many environmental and cultural factors, including early socialization, traditional sex-role expectations of society, home-versus-career conflict, and the experiences typical of women and men as members of various ethnic and social class groups.

D. Manuals should recommend that the inventory be accompanied by orientation dealing with possible influences of factors in C above on men's and women's scores. Such orientation should encourage respondents to examine stereotypic "sets" toward activities and occupations and should help respondents to see that there is virtually no activity or occupation that is exclusively male or female.

E. Interpretive materials for inventories that use homogeneous scales, such as health and mechanical, should encourage both sexes to look at all career and educational options, not just those traditionally associated with their sex group, within the broad areas in which their highest scores fall.

F. Occupational titles used in the interpretive materials and in the interpretation session should be stated in gender-neutral terms (e.g., letter carrier instead of mailman) or both male and female titles should be presented (e.g., actor/actress).

G. The written discussions in the interpretive materials (as well as all inventory text) should be stated in a way which overcomes the impression presently embedded in the English language that a) people in general are of the male gender, and b) certain social roles are automatically sex-linked.

H. The user's manual a) should state clearly that all jobs are appropriate for qualified persons of either sex; and b) should attempt to dispel myths about women and men in the world of work that are based on sex-role stereotypes. Furthermore, ethnic occupational stereotypes should not be reinforced.

I. The user's manual should address possible user biases in regard to sex roles and to their possible interaction with age, ethnic group, and social class, and should caution against transmitting these biases to the respondent or reinforcing the respondent's own biases.

J. Where differences in validity have been found between dominant and minority groups (differentiated by sex), separate interpretive procedures and materials should be provided that take these differences into account.

K. Interpretive materials for respondent and user should encourage exploratory experiences in areas where interests have not had a chance to develop.

L. Interpretive materials for persons re-entering paid employment or education and persons changing careers or entering post-retirement careers should give special attention to score interpretation in terms of the effects of years of stereotyping and home-career conflict, the norms on which the scores are based, and the options such individuals might explore on the basis of current goals and past experiences and activities.

M. Case studies and examples presented in the interpretive materials should represent men and women equally and should include but not be limited to examples of each in a variety of non-stereotypic roles. Case studies and examples of mature men and women and of men and women in different social class and ethnic groups should also be included where applicable.

N. Both user's manuals and respondent's materials should make it clear that interest inventory scores provide only one kind of

helpful information, and that this information should always be considered together with other relevant information--skills, accomplishments, favored activities, experiences, hobbies, influences, other test scores, and the like--in making any career decision. However, the possible biases of these variables should also be taken into consideration.

Appendix II-11

Footnotes

[1]For a comprehensive analysis of the many forms in which sex bias appears in written materials, the reader is referred to the guidelines of Scott, Foresman and Company (1972).

[2]An alternative interpretation of sex bias has been suggested by Dr. Dale Prediger and Dr. Gary Hanson. It defines sex restrictiveness in interest inventory reporting procedures and indicates under what conditions sex restrictiveness is evidence of sex bias. In summary, it can be stated as follows:

> An interest inventory is sex-restrictive to the degree that the distribution of career options suggested to males and females as a result of the application of scoring or interpretation procedures used or advocated by the publisher is not equivalent for the two sexes. Conversely, an interest inventory is not sex-restrictive if each career option covered by the inventory is suggested to similar proportions of males and females. A sex-restrictive inventory can be considered to be sex-biased unless the publisher demonstrates that sex-restrictiveness is a necessary concomitant of validity.

Still another interpretation has been suggested by Dr. John L. Holland:

> An inventory is unbiased when its experimental effects on female and male respondents are similar and of about the same magnitude--that is, when a person acquires more vocational options, becomes more certain, or learns more about himself (herself) and the world of work...The principles can be extended to any area of bias by asking what differences proposed revisions of inventories, books, teacher and counselor training would make.

A fuller explanation of both of these interpretations will appear in Issues of Sex Bias and Sex Fairness in Career Interest Measurement (U.S. Government Printing Office, 1974, in press).

Appendix II-12

REFERENCES

American Psychological Association. Standards for Educational Psychological Tests. Washington, D.C.: American Psychological Association, 1974. Available from the American Psychological Association, 1200 17th St., N.W., Washington, D.C. 20036. $5.00 for non-members; $3.00 for members.

Equal Employment Opportunity Commission. "Guidelines on Employee Selection Procedures." Federal Register, Vol. 35, No. 149.

Diamond, Esther E., Editor. Issues of Sex Bias and Sex Fairness in Career Interest Measurement. Washington, D.C.: U.S. Government Printing Office, 1974, in press. To be available from the Career Education Program, National Institute of Education, Washington, D.C. 20208.

Scott, Foresman and Company. Guidelines for Improving the Image of Women in Textbooks. Glenview, Illinois, September, 1972. Available from Scott, Foresman and Company, 1900 East Lake Avenue, Glenview, Illinois 60025.

Title IX, Education Amendments of 1972. Public Law 92-318, June 23, 1972.

References

Adult Education Association of the U.S.A., Washington, D.C. and Syracuse University, ERIC Clearinghouse on Adult Education, Syracuse, N.Y. Continuing Education for Women. 1970. (ED 042 122)

Almquist, E. M. Sex stereotypes in occupational choice - The case for college women. Journal of Vocational Behavior; 1974, 5, 13-22.

AMEG Commission on Sex Bias in Measurement. AMEG commission report on sex bias in interest measurement. Measurement and Evaluation in Guidance, 1973, 6, 171-177.

Andrews, H. A. Personality patterns and vocational choice: A test of Holland's theory with adult part-time community college students. Doctoral dissertation, University of Missouri, Columbia, 1971. Dissertation Abstracts International, 1971, 32, 3014A.

Astin, H. S. & Myint, T. Career development and stability of young women during the post high school years. Journal of Counseling Psychology, 1971, 19, 369-394.

Astin, H. S., Suniewick, N., & Dweck, S. Women: A bibliography on their education and careers. Washington, D.C.: Human Service Press, 1971.

Ball, S. & Cross, K. P. Barriers to participation of women in continuing education. Abstract from Inventory of Current Research on Post-Secondary Education, 1972.

Barabas, J. Women: Their educational and career roles. An annotated bibliography of selected ERIC references. ERIC-IRCD Urban Disadvantaged Series, Number 31, August 1972. (ED 067 423)

Belson, B. A. Supplemental References re: the counseling of women. The Counseling Psychologist, 1973, 4, 96-101.

Bem, S. L. & Bem, D. J. Training the woman to know her place: The social antecedents of women in the world of work. 1973. (ED 082 098)

Berry, J., & Others. Counseling girls and women--Awareness, analysis, action. Kansas City, Mo., University of Missouri; Jefferson City, Mo., Missouri State Department of Labor and Industrial Relations, 1966. (ED 018 558)

Birk, J. M. Interest inventories: A mixed blessing. Vocational Guidance Quarterly, 1974, 22, 280-286.

Birk, J. M. Reducing sex bias: Factors affecting the client's view of the use of career interest inventories. E. E. Diamond (Ed.) Issues of sex bias and sex fairness in career interest measurement. Washington, D.C.: U.S. Government Printing Office, 1975.

Birk, J.M. & Tanney, M. F. Career exploration for high school women: A model. 1973. (ED 079 662)

Blau, P. M., Gustad, J. W., Jessor, R., Parnes, H. S., & Wilcock, R. C. Occupational choice: A conceptual framework. Industrial & Labor Relations Review, 1956, 9, 531-543.

Brandenburg, J. B. The needs of women returning to school. Personnel and Guidance Journal, 1974, 53, 11-18.

Burnside, R. W. Group counseling techniques for adults returning to college. Journal of College Student Personnel, 1974, 15, 62.

Campbell, D. P. Reaction to the AMEG Commission Report on sex bias in interest measurement. Measurement and Evaluation in Guidance, 1973, 6, 178-180

Campbell, D. P. Manual for the Strong - Campbell Interest Inventory (Merged form). Stanford: Stanford University Press, 1974.

Campbell, D. P. & Harmon, L. W. Vocational interests of non-professional women. Final Report. Washington, D.C., Office of Education (DHEW), 1968. (ED 027 433)

Chitayat, D. & Carr, S. The new occupational student: The mature adult woman. Report prepared for the Institute for Research and Development in Occupational Education, Center for Advanced Study in Education, City University of New York, 1975.

Clements, K. Emotional characteristics of mature women students in education. Eastfield College, Dallas County Community College District. Paper presented at anual meeting of the American Educational Research Association, Chicago, 1974. (ED 087 980)

Cole, N. S. On measuring the vocational interests of women. Journal of Counseling Psychology, 1973, 20, 105-112.

Cole, N. S. & Hanson, G. R. Impact of interest inventories on career choice. In E. E. Diamond (Ed.), Issues of sex bias and sex fairness in career interest measurement. Washington, D.C.: U.S. Government Printing Office, 1975.

Continuing Education of Women, Report of a Seminar (Toronto, Canada, March 1, 2, 3, 1973.) Canadian Association for Adult Education, Toronto, Canada. (ED 076 869)

Cross, K. P. Beyond the open door: New students to higher education. San Francisco: Jossey - Bass, 1971.

Cunningham, M. M. Sister. The older student. Paper presented at the CASC Workshop. August, 1973. (ED 089 162)

Dewey, C. R. Exploring interests: A non-sexist method. Personnel and Guidance Journal, 1974, 52, 311-315.

de Wolf, V. & Lunneborg, P. W. Descriptive information on over 35 undergraduate students. Washington University, Seattle, Bureau of Testing. December 1972. (ED 072 745)

Diamond, E. E. Occupational interests: Male-female or high-low level dichotomy? Journal of Vocational Behavior, 1971, 1, 305-315.

Diamond, E. E. The masculinity-feminity scale in interest measurement: An idea whose time has passed. Paper presented at the American Psychological Association Covention. Honolulu, September 1972. (ED 069 795)

Diamond, E. E. (Ed.) Issues of sex bias and sex fairness in career interest measurement. Washington, D.C.: U.S. Government Printing Office, 1975.

Doherty, M. A. Sexual bias in personality theory. Counseling Psychologist, 1973, 4, 67-74.

Doty, B. A. "Why do mature women return to college?" Journal of the National Association of Women Deans and Counselors. 1966, 29, 171-174.

Eason, J. Life style counseling for a reluctant leisure class. Personnel and Guidance Journal, 1972, 51, 127-132.

Ekstrom, R. B. Barriers to women's participation in post-secondary education, a review of the literature. (ED 072 368)

ERIC Clearinghouse on Adult Education. Continuing Education of Women. 1973. (ED 076 869)

Eyde, L. D. Eliminating barriers to career development of women. Personnel and Guidance Journal, 1970, 49, 24-28.

Farmer, H. S. & Bohn, M. J. Home-career conflict reduction and the level of career interest in women. Journal of Counseling Psychology, 1970, 17, 228-232.

Fought, C. A. Returning adult women students: Pre- and post-counseling attitudes and plans. Washington, D.C., American Personnel and Guidance Association; Columbus, Ohio, Ohio State University, 1970. (ED 040 448)

Gable, R. K. Perceptions of personal control and conformity of vocational choice as correlates of vocational development. 1973. (ED 082 086)

Gottfredson, G.D. A note on sexist wording in interest measurement. Measurement and Evaluation in Guidance, 1975, 8, (in press).

Gottfredson, G. D., Holland, J. L., & Gottfredson, L. S. The relation of vocational aspirations and assessments to employment reality. Report No. 181. Baltimore, Md.: Center for the Social Organization of Schools., Johns Hopkins University, 1974.

Grosz, R. D. & Joseph, C. D. Vocational interests of black college women. Colorado University, 1973. (ED 075 731)

Gump, J. P. & Rivers, L. W. A consideration of race in efforts to end sex bias. In E. E. Diamond (Ed.), Issues of sex bias and sex fairness in career interest measurement. Washington, D.C.: U.S. Government Printing Office, 1975.

Haener, D. The working woman: Can counselors take the heat? Personnel and Guidance Journal, 1972, 51, 109-112.

Halfter, I. The comparative achievement of young and old. Journal of the National Association of Women Deans and Counselors, 1962, 25, 60-67.

Hall, D. T. & Gordon, F. E. Career choices of married women: Effects on conflict, role behavior, and satisfaction. Journal of Applied Psychology, 1973, 58, 42-48.

Hanson, G. R. & Cole, N. S. The vocational interests of young adults. Iowa City, Iowa: American College Testing Program, 1973.

Hanson, G. R., Lamb, R. R., & English, E. An analysis of Holland's interest types for women: A comparison of the Strong - Holland & the ACT Vocational Interest Profile - scales for women. Journal of Vocational Behavior, 1974, 4, 259-269.

Hanson, G. R. & Lenning, O. T. Differences in characteristics and outlooks of men and women college students at various age levels. 1973. (ED 078 840)

Hansot, E. A "second change" program for women: The New School for Social Research. Change, 1973, 5, 49-51.

Harmon, L. W. Women's interests - fact or fiction? Personnel and Guidance Journal, 1967, 45, 895-900. (a)

Harmon, L. W. Women's working patterns related to their SVIB housewife and "own" occupational scores. Journal of Counseling Psychology, 1967, 14, 299-301. (b)

Harmon, L. W. Anatomy of career commitment in women. Journal of Counseling Psychology, 1970, 17, 77-80. (a)

Harmon, L. W. Strong Vocational Interest Blank profiles of disadvantaged women. Journal of Counseling Psychology, 1970, 17, 519-522. (b)

Harmon, L. W. Sexual bias in interest measurement. Measurement and Evaluation in Guidance, 1973, 5, 496-501.

Harmon, L. W. Technical aspects: Problems of scale development, norms, item differences by sex, and the rate of change in occupational group characteristics (I). In E. E. Diamond (Ed.), Issues of sex bias and sex fairness in career interest measurement. Washington, D.C.: U.S. Government Printing Office, 1975.

Harmon, L. W. & Campbell, D. P. Use of interest inventories with non-professional women: Stewardesses versus dental assistants. Journal of Counseling Psychology, 1968, 15, 17-22.

Harvey, D. W. An examination of the validity of Holland's constructs for adult women. Paper presented at meeting of APGA, San Diego, February 1973. (ED 074 399)

Holland, J. L. Some guidelines for reducing systematic biases in the delivery of vocational services. Measurement and Evaluation in Guidance, 1974, 6, 210-218.

Holland, J. L. The use and evaluation of interest inventories and simulations. In E. E. Diamond (Ed.), Issues of sex bias and sex fairness in career interest measurement. Washington, D.C.: U.S. Government Printing Office, 1975.

Hornaday, J. A. & Kuder, G. F. A study of male occupational interest scales applied to women. Educational and Psychological Measurement, 1961, 21, 859-864.

Huth, C. M. Measuring women's interests: How useful? Personnel and Guidance Journal, 1973, 51, 539-545.

Jacobson, R. F. The organization and administration of special counseling programs for adult women in colleges and universities. Los Angeles, Calif., University of Southern California, 1969.

Jakubowski & Spector, P. Facilitating the growth of women through assertive training. Counseling Psychologist, 1973, 4, 75-86.

Jeghelian, A. Marital status, age, and occupational level of adult women students: Implications for counseling. March 1969. APGA paper. Chicago. (ED 066 693)

Johansson, C. B. Technical aspects: Problems of scale development, norms, item differences by sex, and the rate of change in occupational group characteristics (II). In E. E. Diamond (Ed.), Issues of sex bias and sex fairness in career interest measurement. Washington, D.C.: U.S. Government Printing Office, 1975.

Johnson, R. W. The use of interest inventories with women. Madison, Wisconsin, University of Wisconsin Counseling Center Reports, 1970, 3, #13. (ED 042 194)

Johnson, R. W. Congruence of SVIB-W and KOIS profiles. Journal of Counseling Psychology, 1971, 18, 450-455.

Johnson, R. W. Content analysis of the Strong Vocational Interest Blank for women. Journal of Vocational Behavior, 1974, 5, 125-132.

Karman, F. J. Women: Personal and environmental factors in role identification and career choices. UCLA, CSE #89, August 1973. (ED 084 383)

Kaynor, E. H. Council for the continuing education of women annual report. Miami, Florida, May 15, 1972. (ED 073 330)

Kievit, M. B. Review and synthesis of research on women in the world of work. Columbus, Ohio: ERIC Clearinghouse on Vocational & Technical Education, The Center for Vocational and Technical Education, The Ohio State University, March 1972. (Information Series No. 56) (VT 014 690)

Klemmack, D. L. & Edwards, J. N. Women's acquisition of stereotyped occupational aspirations. Sociology & Social Research, 1973, 57, 510-525.

Kuhn, T. S. The structure of scientific revolutions (2nd edition), Chicago: University of Chicago Press, 1970.

Letchworth, G. E. Women who return to college: An identity - integrity approach. Journal of College Student Personnel, 1970, 11, 103-106.

Likert, J. (Ed.) Conversations with returning women students. Ann Arbor, Michigan: University of Michigan Center for Continuing Education of Women, 1967. (ED 017 815)

Lunneborg, P. W., Olch, D. R., & de Wolf, V. Prediction of college performance in older students. Journal of Counseling Psychology, 1974, 21, 215-221.

Mackeen, B. A. & Herman, A. Effects of group counseling on self-esteem. Journal of Counseling Psychology, 1974, 21, 210-214.

Manis, L. G. & Mochizuki, J. Search for fulfillment: A program for adult women. Personnel and Guidance Journal, 1972, 50, 594-597.

Markus, H. Continuing education for women: Factors influencing a return to school and the school experience. 1973. (ED 078 296)

Marple, B.L. Counseling mature women from differing cultures. Paper presented at the meeting of APGA, Chicago, March 1972. (ED 067 574)

Mason, K. O. & Bumpass, L. L. Women's sex-role attitudes in the United States, 1970. A revised version of a paper presented at the American Sociological Association annual meetings, August, 1973.

Matthews, E. The counselor and the adult woman. Journal of National Association of Women Deans and Counselors, 1969, 32, 115-122.

Matthews, E. & Tiedeman, D. V. Attitudes toward career and marriage and the development of life style in young women. Journal of Counseling Psychology, 1964, 11, 375-384.

Medvene, A. M. & Collins, A. Occupational prestige and its relationship to traditional and non-traditional views of women's roles. Journal of Counseling Psychology, 1974, 21, 139-143.

Mencke, R. A. & Cochran, D. J. Impact of a counseling outreach workshop on vocational development. Journal of Counseling Psychology, 1974, 21, 185-190.

Miller, B. J. Inner city women in white schools. The Journal of Negro Education, 1973, 42, 392-413.

Mulligan, K. L. A question of opportunity: Women and continuing education: National Advisory Council on Extension and Continuing Education. Washington, D.C., March 1973. (ED 081 323)

Munley, P. H. Interests of career and homemaking oriented women. Journal of Vocational Behavior, 1974, 4, 43-48.

Nafziger, D. H. & Helms, S. T. Cluster analyses of the SVIB, MV II and Kuder OIS as tests of an occupational classification. Baltimore, Maryland: John Hopkins University, 1972. (ED 070 873)

Oliver, L. W. Counseling implications of recent research on women. The Personnel and Guidance Journal, 1975, 53, 430-437.

O'Shea, A. J. & Harrington, T. F. Jr. Strong Vocational Interest Blank and Kuder Occupational Interest Survey differences reexamined in terms of Holland's vocational theory. Journal of Counseling Psychology, 1972, 19, 455-460.

Pinto, P. R. & Buchmeier, J. O. Problems and issues in the employment of minority, disadvantaged and female groups: An annotated bibliography. (Industrial Relations Center, Bulletin 59.) Minneapolis: University of Minnesota, 1973. (ED 083 339//. Not available from EDRS.)

Prediger, D. J. & Hanson, G. R. The distinction between sex restrictiveness and sex bias in interest inventories. Measurement and Evaluation in Guidance, 1974, 7, 96-104.

Programs, problems and needs in women's continuing education: Proceedings of a statewide conference for institutions of higher education, community and government representatives. Seattle, Washington, November 8, 1968. (ED 032 456)

Psathas, G. Toward a theory of occupational choice for women. Sociology and Social Research, 1968, 52, 253-268.

Putnam, B. A. & Hansen, J. C. Relationship of self-concept and feminine role concept to vocational maturity in young women. Journal of Counseling Psychology, 1972, 19, 436-440.

Reynolds, M. J., Purtell, J., & Voorhees, A. Occupational opportunity for the mature woman, or Mother wore a beanie. Vocational Guidance Quarterly, 1969, 17, 194-197.

Roe, A. The psychology of occupations. New York: John Wiley & Sons, 1956.

Roe, A. & Klos, D. Occupational classification. The Counseling Psychologist, 1969, 1, 84-89.

Rosenwood, L. M. & Lunneborg, P. W. Women in continuing education. Seattle, Washington: Washington University, 1972. (ED 067 997)

Royce, M. The continuing education of women; Some programs in the United States of America. Toronto, Ontario, Ontario Institute for Studies in Education, Department of Adult Education, 1968. (ED 023 059)

Schlossberg, N. K. A framework for counseling women. Personnel and Guidance Journal, 1972, 51, 137-143.

Schlossberg, N. K. & Pietrofesa, J. J. Perspectives on counseling bias: Implications for counselor education. Counseling Psychologist, 1973, 4, 44-53.

Schofield, L. F. & Caple, R. B. Self-concepts of mature and young women students. Journal of College Student Personnel, 1971, 12, 297-302.

Seear, B. N. Re-entry of women to the labor market after an interruption in employment. Paris: Organization for Economic Cooperation and Development, 1971.

Sex, society and the female dilemma - A dialogue between Simone de Beauvior and Betty Friedan. Saturday Review, June 14, 1975, pp. 14; 16-18; 20; 56.

Suniewick, N. Beyond the findings: Some interpretations and implications for the future. In H. S. Astin, N. Suniewick, & S. Dweck. Women: A bibliography on their education and careers. Washington, D.C.: Human Service Press, 1971, 11-26.

Taines, B. First Semester of the Diablo Valley College Women's Re-Entry Program, Fall 1972 and a Program for Women at Diablo Valley College. April 1973. (ED 087 512)

Tanney, M. F. Face validity of interest inventory measures. In E. E. Diamond (Ed.), Issues of sex bias and sex fairness in career interest measurement. Washington, D.C.: U.S. Government Printing Office, 1975.

Tittle, C. K. Sex bias in educational measurement: fact or fiction. Measurement and Evaluation in Guidance, 1974, 6, 219-227.

Tomlinson-Keasey, C. Role variables: Their influence on female motivational constructs. Journal of Counseling Psychology, 1974, 21, 232-237.

Troll, L. & Schlossberg, N. How "age biased" are college counselors? Industrial Gerontology, 1971, 10, 14-20.

U.S. Bureau of the Census. School enrollment - social and economic characteristics of students: October 1974 (Advance report). Current Population Reports, Series P-20, No. 278. Washington, D.C.: U.S. Government Printing Office, 1975.

Verheyden-Hilliard, M. E. Expanding opportunities for the re-entry woman: The use of interest inventories with the mature woman. In E. E. Diamond (Ed.), Issues of sex bias and sex fairness in career interest measurement. Washington, D.C.: U.S. Government Printing Office, 1975.

Vetter, L. Career counseling for women. The Counseling Psychologist, 1973, 4, 54-67.

Warnath, C. F. Vocational theories: Direction to nowhere. Personnel and Guidance Journal, 1975, 53, 422-428.

Westervelt, E. M. A tide in the affairs of women: The psychological impact of feminism on educated women. The Counseling Psychologist, 1974, 4, 3-26.

Westervelt, E. M. Report on operation of New York State Guidance Center for Women, November 6, 1966 to August 31, 1968. 1968. (ED 031 635)

Westervelt, E. M. Barriers to women's participation in postsecondary education: A review of research and commentary as of 1973-74. National Center for Educational Statistics, (NCES 75-407) Washington, D.C.: U.S. Government Printing Office, 1975.

Westervelt, E. M. & Fixter, D. A. Women's higher and continuing education: An annotated bibliography with selected references on related aspects of women's lives. College Entrance Examination Board. New York, 1971.

Williams, G. D. et al. Urgency and types of adult counseling needs among continuing education students. Journal of College Student Personnel, 1973, 14, 501-506.

Wolfe, H. B. An analysis of the work values of women: Implications for counseling. Journal of the National Association of Women Deans and Counselors, 1969, 33, 13-17.

Women's Bureau, U.S. Department of Labor. Twenty facts on women workers. Washington, D.C.: Women's Bureau, 1972.

Zytowski, D. G. Relationships of equivalent scales on three interest inventories. Personnel and Guidance Journal, 1968, 47, 44-49.

Zytowski, D. G. Toward a theory of career development for women. Personnel and Guidance Journal, 1969, 47, 660-664.

Zytowski, D. G. Equivalence of the Kuder Occupational Interest Survey and the Strong Vocational Interest Blank revisited. Journal of Applied Psychology, 1972, 56, 184-185.

Reference Notes

1. Hussein, A. L. Symposium on barriers to continuing education for women: Analysis of census data. Paper presented at APA convention, Honolulu, September 1972.

2. Vetter, L. Career patterns of a national sample of women. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, in process.

3. Sweet, R. Research report on anti-feminism in the theory and practice of vocational psychology. Research Section, Division of Vocational Guidance Services, Dept. of Laboer & Industry, N.S.W. Australia: September 1974.

4. Tittle, C. K. & Denker, E. R. Home-career conflict reduction revisited: The effects of experimental directions on KOIS scores for women. 1975. (Submitted for publication.)

5. Denker, E. R., and Tittle, C. K. "Reasonableness" of KOIS results: An indication of construct validity for a sample of re-entry women. (Submitted for publication.)

6. Tittle, C. K. and Denker, E. R. KOIS profiles of re-entry women. (in process.)

Uncited References

Almquist, E. M. & Angrist, S. S. Career salience and atypicality of occupational choice among college women. Journal of Marriage and Family, 1970, 32, 242-249.

Almquist, E. M. & Angrist, S. S. Role Model influence on college women's career aspirations, Merrill-Palmer Quarterly of Behavior and Development, 1971, 17, 263-279.

Cole, N. S., Whitney, D. R., & Holland. J. L. A spatial configuration of occupations. Journal of Vocational Behavior, 1971, 1, 1-9.

Crites, J. O. Methodological issues in the measurement of career maturity. Measurement and Evaluation in Guidance, 1974, 6, 200-209.

Epstein, C. F. Woman's place: Options and limits in professional careers. Berkeley: University of California Press, 1971.

Figel, W. J. Developing an academic ability scale for the Kuder Occupational Interest Survey. SRA, Inc., Chicago. Paper presented at APGA, San Diego. February 1973. (ED 078 000)

Friend, J. G. Personal and vocational interplay in identity building: A longitudinal study. Boston, Mass: Branden, 1973.

Hansen, J. C. & Ansell, E. M. Assessment of vocational maturity. Journal of Vocational Behavior. 1973, 3, 89-94.

Hawley, P. What women think men think: Does it affect their career choice? Journal of Counseling Psychology, 1971, 18, 193-199.

Hembrough, B. L. A two-fold educational challange: The student wife and the mature woman student. Journal of the National Association of Women Deans and Counselors, 1966, 29, 163-167.

Johnson, R. W. Parental identification and vocational interests of college women. Measurement and Evaluation in Guidance, 1970, 3, 147-151.

Katz, J. & Others. Educational and occupational aspirations of adult women. Report to the College Entrance Examination Board. Palo Alto, Calif., Stanford University, Institute for Study of Human Problems, 1970. (ED 045 005)

Keniston, K. & Keniston, E. An American anacronism: The image of women and work. The American Scholar, 1964, 33, 355-375.

King, L. A. & Bellezza, F. A comparison of two vocational interest tests used with general college students. General College Studies, 6 (3). University of Minnesota, 1969-1970.

Lord, M. E. M. Mature women and the degree of Doctor of Philosophy. Unpublished doctoral dissertation. University of Wisconsin, 1968.

Mansfield, R. Self-esteem, self perceived abilities, and vocational choice. Journal of Vocational Behavior, 1973, 3, 433-441.

National Center for Education Statistics. Participation in adult education: Final Report, 1969. Adult Education, No. 75-165. Washington, D.C.: U.S. Government Printing Office, 1974.

Risch, C. & Beymer, L. A. A framework for investigating career choice of women. Vocational Guidance Quarterly, 1967, 16, 87-91.

Standley, K. & Soule, B. Women in male-dominated professions: Contrasts in their personal and vocational histories. Journal of Vocational Behavior, 1974, 4, 245-285.

Thomas, A. H. & Stewart, N. R. Counselor response to female clients with deviate and conforming career goals. Journal of Counseling Psychology, 1971, 18, 352-357.

U.S. Bureau of the Census. Social and economic characteristics of students: October, 1973. Current Population Reports, Series P-20, No. 272. Washington, D.C.: U.S. Government Printing Office, 1974.

U.S. Bureau of the Census. Income and expenses of students enrolled in post-secondary schools: October 1973. Current Population Reports, Series P-20, No. 281. Washington, D.C.: U.S. Government Printing Office, 1975.

U.S. Department of Labor. Handbook on women workers, Women's Bureau Bulletin 294. Washington, D.C.: U.S. Government Printing Office, 1969.

Veres, H. C. & Moore, K. M. Career innovative and non-innovative women in the two-year college: Implications for counseling. Paper presented at American Educational Research Association. Washington, D.C.: April 1975.

Women's Bureau, U.S. Dept. of Labor. Why Women Work. Washington, D.C.: U.S. Government Printing Office, 1967. (ED 014 590)

Zytowski, D. G. A concurrent test of accuracy-of-classification of the Strong Vocational Interest Blank and the Kuder Occupational Interest Survey. Journal of Vocational Behavior, 1972, 2, 245-250.

Zytowski, D. G. (Ed.) Contemporary approaches to interest measurement. Minneapolis, Minnesota: University Minnesota Press, 1973.

Zytowski, D.G. An inventory of interest and work value inventories. Iowa State University, Ames, Iowa. February, 1974.